

AMENDMENTS TO THE CLAIMS are reflected in the listing of claims that begins on page 9 of this paper.

REMARKS/ARGUMENTS begin on page 2 of this paper.

Amendments to the Claims:

A version of the claims with markings to show changes is attached as Attachment A. Amended and new claims are so indicated in Attachment A. The attached listing of claims will replace all prior versions, and listings, of claims in the application.

REMARKS

Applicant respectfully requests reconsideration of the instant application on the basis of newly added Claims 10-12. Claims 3, and 8 continue as the main claims and the remaining claims are directly or indirectly dependent upon those.

The Examiner has rejected the claims as being unpatentable over U.S. Patent No. 5,797,964 by Carlson *et al.* (*Carlson*). It is believed that Claims 3 to 12 are clearly distinguishable over this *Carlson* reference for the reasons that will be set forth.

The nonanalogous prior art *Carlson* reference describes a cardiac monitor and its connected power supply.

35 U.S.C. § 103 Grounds for Rejection

The Examiner rejected the Claims under 35 U.S.C. § 103(a) as being unpatentable over the *Carlson* patent. Applicant respectfully traverses these rejections for the reasons discussed below.

Carlson is nonanalogous prior art

Carlson discloses the possible use of a power supply in a cardiac monitor, whose purpose is "to supply resistive heating power to a continuous cardiac monitoring catheter (col. 1, lines 21-24). *Carlson* thus is nonanalogous prior art and the Examiner should not consider *Carlson* "for the purpose of analyzing the obviousness of the subject matter at issue. 'In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.'" M.P.E.P. §2141.01(a) citing *In re Oetiker*, 977 F.2d 1143, 1446 (Fed.Cir. 1992).

Here the present patent application in the first few paragraphs describes the problem confronting the inventor, which the inventor is seeking to solve.

"For commercial applications, the expense of a variable voltage DC power supply can be prohibitive. An alternative method is described by Phillips, et al. in U.S. Patent No. 5,855,672. The electrical current is switched on and off, varying the proportion of current on time based on a feedback signal. The variation of current on time yields a variable time averaged oxygen output. When a storage plenum is inserted between the ceramic electrolyte and the oxygen output port and the pressure is monitored, a variable continuous output can be achieved, replenished by the on-off switching according to the usage rate.

"Many commercial applications also call for extended product lifetimes, sometimes in excess of 20,000 hours. During early life testing of Integrated Manifold and Tube (IMAT) or ceramic oxygen generating modules, a strong correlation has been noted between long life and low drive voltages. Applying voltage to modules using full-wave rectified AC as a low cost power source dramatically increased the rate of migration of silver across the electrical isolations that are an integral part of an electrical interconnection system as compared to a DC applied voltage equivalent to the RMS value of the rectified AC voltage. Based on studies using steady DC drive voltages, it has been

found that minimizing the peak voltage input to the module is desirable for long COGS product life. "

Thus, the power supplies have different functions, and one of ordinary skill in the art would not have been motivated to replace the known gas generating power circuit in which the electrical current is switched on and off for varying the proportion of current on time based on a feedback signal with stepped voltage controller of the present invention.

Therefore, the *Carlson* reference is NOT reasonable pertinent to the problem confronting the inventor, which the inventor is seeking to solve. *Carlson* and the present invention are "different fields of endeavor." Accordingly, *Carlson* should not be considered for an obviousness analysis of this invention as claimed.

The basic requirements of a *Prima Facie* case of obviousness have not been met.

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." [Emphasis added] M.P.E.P. §2143, p. 2100-129.

By the structure as claimed by the Applicant is able to achieve the advantages which have hitherto not been able to be achieved through any adaption of the prior art. It is therefore believed to be clear that the particular structure of Applicant is extremely important and is not a mere matter of design.

It is improper to use hindsight having read the Applicant's disclosure to "pick and choose" among isolated prior art references to disparage the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Even where an invention is, as a whole, fully disclosed by a combination of prior art elements, such elements cannot be combined to defeat a patent as obvious unless the art teaches or suggests the desirability of making the combination.

ASC Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). Thus, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, U.S.P.Q.2d 1780 (Fed. Cir. 1992). Finally, it is the invention as a whole that is important. Focusing on the obviousness of substitutions and differences, instead of on the invention as a whole, is a legally improper way to simplify the often difficult determination of obviousness. Gillette Co. v. S. C Johnson & Son, Inc., 919 F. 2d 720, 16 U.S.P.Q. 1923 (Fed. Cir. 1990).

Independent Claim 3 recites the following elements, the most pertinent to this discussion being presented in bold type for the convenience of the Examiner:

3. An electro-chemical gas generating system for concentrating a selected gas from a feedstock fluid of the type including a **ceramic membrane system permeable to selected charged particles flowing from a first side to a second side**, the invention comprising:

a direct current (DC) power source in an **electrical power circuit connected across the first and second sides of the ceramic membrane system**;

a plurality of resistive elements each having a fixed ohmic resistance, and each connectable in parallel electrical paths in the electrical power circuit;

resistor switch means for selectively connecting a desired resistive element in the electrical power circuit between the DC power source and ceramic membrane system; and

control means for controlling the connection of at least one resistive element in the electrical power circuit;

whereby the controller controllably affects a varying flow of charged particles across the ceramic membrane. [*Emphasis Added*]

Carlson fails to teach or suggest these claim elements. *Carlson* discloses a power supply for a cardiac monitor. Col. 1, lines 21-24. Nor is it even obvious to try to use the teachings of *Carlson* to solve the problem as presented in the application.

Without a motivation to combine or modify the teaching of prior art, a rejection based on a *prima facie* case of obviousness has been found to be improper. And "[t]he level of skill in the art cannot be relied upon to provide the suggestion to combine references." See M.P.E.P. §2143.01.

Dependent Claims 4-7 that depend from independent Claim 3 are also not made obvious by *Carlson* because they include the limitations of Claim 3 and add additional elements that further distinguish the art. Therefore, Applicant respectfully requests that Claims 3-7 be allowed.

Further, in order to establish a prima facie case of obviousness, the prior art teachings must be sufficient to suggest making the substitution or modification necessary to make the claimed invention to one of ordinary skill in the art, In re Lahu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984), in the absence of applicant's own disclosure. See also, In re Laskowski, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398-99 (Fed. Cir. 1989) and Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985). The motivation to make a specific structure

"is not abstract, but practical, and is always related to the properties or uses one skilled in the art would expect the [structure] to have, if made."

In re Gvurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979). See also Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985) ("Critical

inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and, thus, the obviousness, of making the combination''').

Here there is lacking the requisite suggestion in these prior art disclosures that would have motivated the artisan to do what the Examiner has characterized as being an obvious combination.

The preambles of the claims should be considered.

The preamble of independent claims 3 and 8 should be considered when interpreting the structure of the present invention. The entire claim should be considered when it is necessary to give meaning to the claim. The prior art structure must be able to performing the intended use as stated in the preamble. M.P.E.P. §2111.02.

New Claims

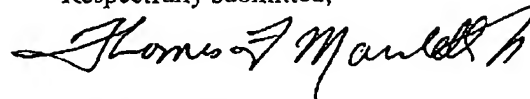
New Claims 10-12 are added to more fully claim the present invention. The new claims either directly or indirectly depend from Claim 8.

Conclusion

Applicant has now made an earnest attempt to place this case in condition for allowance. In light of the amendments and remarks set forth above, Applicant respectfully requests reconsideration and allowance of Claims 3-12.

If there are matters which can be discussed by telephone to further the prosecution of this Application, Applicant invites the Examiner to call the attorney at the number listed below at the Examiner's convenience.

Respectfully submitted,



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ATTACHMENT A

**LISTING OF CLAIMS WITH MARKINGS
TO SHOW CHANGES MADE**

Attachment A
Listing with Markings
9

Claim(s)

Claims 1-2. (Cancelled)

3. (original) An electro-chemical gas generating system for concentrating a selected gas from a feedstock fluid of the type including a ceramic membrane system permeable to selected charged particles flowing from a first side to a second side, the invention comprising:

a direct current (DC) power source in an electrical power circuit connected across the first and second sides of the ceramic membrane system;

a plurality of resistive elements each having a fixed ohmic resistance, and each connectable in parallel electrical paths in the electrical power circuit;

resistor switch means for selectively connecting a desired resistive element in the electrical power circuit between the DC power source and ceramic membrane system; and

control means for controlling the connection of at least one resistive element in the electrical power circuit;

whereby the controller controllably affects a varying flow of charged particles across the ceramic membrane.

4. (original) The invention of claim 3 wherein the resistive element is a resistor.

5. (original) The invention of claim 3 wherein the resistive element generates waste energy in the form of heat.

6. (original) The invention of claim 5 wherein the waste energy is used to preheat the fluid used as a feedstock for the gas generating system.

7. (original) The invention of claim 3 wherein the resistive element is mounted within an oven chamber for the gas generating system.

8. (Amended) A ~~power supply for a~~ gas generating system including comprising:
- a barrier system permeable to selected charged particles flowing from a first side to a second side;
 - a direct current (DC) power source in an electrical power circuit connected across the first and second sides of the permeable barrier system;
 - a plurality of resistive elements each having a fixed ohmic resistance, and each connectable in parallel electrical paths in the electrical power circuit;
 - resistor switch means for selectively connecting a desired resistive element in the electrical power circuit between the DC power source and barrier system; and
 - control means for controlling the connection of at least one resistive element in the electrical power circuit;
- whereby the controller controllably affects a varying flow of charged particles across the permeable barrier.
9. (previously presented) The invention of claim 8 wherein the permeable barrier system is a component of a ceramic oxygen generating system (COGS).
10. (new) The invention of claim 8 wherein the resistive element generates waste energy in the form of heat.
11. (new) The invention of claim 10 wherein the waste energy is used to preheat fluid used as a feedstock for the gas generating system.
12. (new) The invention of claim 8 wherein the resistive element is mounted within an oven chamber for permeable barrier system component of the gas generating system.

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